

	Design Team PS&E Development Process			Final PS&E Review Process	
Deliverables	Permitting Submittal Review	Intermediate PS&E Submittal Review(s) (60%)	PS&E Presubmittal Review (90%)	Final PS&E Submittal Review(s) (100%)	Ad Copy
<b>ILLUMINATION</b>					
Electrical Calculations	<ul style="list-style-type: none"> <li>Identify Design Criteria, Design Light Level Requirements</li> <li>Identify deficiencies of the existing system and proposed mitigation and impacts to existing system</li> <li>Submit Calculations to Support luminaire type, distribution, wattage, mounting height, spacing, service voltage</li> </ul>	<ul style="list-style-type: none"> <li>Calculations to support transformer sizing and transformer overcurrent protection</li> <li>Service load calculations</li> <li>Electrical load and line loss calculations to support breaker, wire and lighting contractor sizing where applicable for each electrical circuit.</li> <li>Load balancing required for 3-phase service.</li> </ul>	<ul style="list-style-type: none"> <li>Backup data and calculations submitted for review.</li> </ul>		
Structural Calculations		<ul style="list-style-type: none"> <li>Luminaire locations identified</li> <li>Request soil data and prepare cross-sections for each pole location.</li> <li>Submit details for mounting luminaries on structures</li> </ul>	<ul style="list-style-type: none"> <li>Luminaire foundation designs completed.</li> <li>Complete details for mounting luminaires on structures</li> </ul>		
Design Documentation			<ul style="list-style-type: none"> <li>Justify deviation from standard practices.</li> <li>Complete justification for use of non-standard equipment.</li> <li>Attach catalog cuts and data.</li> </ul>		
Electrical Service		<ul style="list-style-type: none"> <li>Utility Agreement and Utility Relocation Requests Submitted</li> <li>Electrical Service location identified, service agreement request processed.</li> </ul>	<ul style="list-style-type: none"> <li>Service Agreement completed.</li> <li>Utility coordination completed</li> </ul>		
Coordination & Constructability	<ul style="list-style-type: none"> <li>Coordinate Visual Standards with Landscape Architect</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate with State Bridge Office for attachment to structures</li> <li>Overhead &amp; underground utility issues and conflicts addressed</li> <li>Identify order of work issues</li> </ul>	<ul style="list-style-type: none"> <li>Address conflicts between illumination system and existing utilities and new construction.</li> <li>Address order of work issues.</li> <li>Applicable Maintenance and Operations Agreements processed.</li> <li>Coordinate Illumination plans with other work on the project</li> <li></li> </ul>		
Temporary Illumination Plans		<ul style="list-style-type: none"> <li>Identify temporary illumination needs and complete preliminary layout</li> </ul>	<ul style="list-style-type: none"> <li>Complete temporary illumination plans.</li> </ul>		
Illumination Plans	<ul style="list-style-type: none"> <li>Base Illumination Plans showing channelization information</li> <li>Verify as-builts with site investigation</li> </ul>	<ul style="list-style-type: none"> <li>Luminaire schedule completed.</li> <li>Identify method for routing conduit across roadways and structures.</li> <li>Show junction boxes and conduit runs.</li> </ul>	<ul style="list-style-type: none"> <li>Complete details for mounting luminaires on structures.</li> <li>Wire notes, wire schedule and construction notes completed.</li> <li>Breaker schedule completed.</li> <li>Include power for illumination, signing, signals and ITS in plans.</li> <li>Conduit fill and junction box capacity calculations</li> </ul>		
Specifications			<ul style="list-style-type: none"> <li>Obtain approval for use of proprietary items, if applicable.</li> <li>Complete Regional and General Special Provision run list (include salvaged materials, use of State furnished materials &amp; other commitments by the State.)</li> <li>Complete project specific specials.</li> <li>Complete provisions for maintaining existing electrical systems</li> </ul>	<ul style="list-style-type: none"> <li>Obtain approval of special provisions.</li> </ul>	
Estimate			<ul style="list-style-type: none"> <li>Provide itemized construction cost estimate for each lump sum bid item.</li> </ul>		